REMARKS

Summary of Final Office Action

Claims 64-75, 78, 87-92 and 99-104 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kantner et al., U.S. Patent No. 6,433,073 (hereafter "KANTNER") in view of Kim et al., U.S. Patent No. 6,372,876 (hereafter "KIM") and further in view of the Handbook of Cosmetic Science and Technology (hereafter "HANDBOOK").

Dependent claims 77, 79-86, 94-98 and 105-109 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over KANTNER in view of KIM and HANDBOOK and further in view of Koch et al., U.S. Patent No. 6,258,963.

Claims 76 and 93 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over KANTNER in view of KIM and HANDBOOK and further in view of Gers-Barlag et al., U.S. Patent No. 5,725,844.

Response to Office Action

Reconsideration and withdrawal of the rejections set forth in the Final Office Action are again respectfully requested.

In this regard, the arguments set forth in the Appeal Brief filed September 29, 2008 and the Reply Brief filed May 4, 2009 are referred to. The corresponding remarks are expressly incorporated herein. Further, consideration of the additional arguments set forth below is respectfully requested.

In the Final Office Action mailed January 29, 2008 the Examiner alleges, *inter alia*, that KANTNER discloses oil-in-water cosmetic compositions which comprise a film-forming

polyurethane and have properties such as water-resistance and transfer resistance. The rejection concedes that KANTNER fails to explicitly teach the K-values and the glass transition temperatures of the polyurethanes recited in the present claims. In this regard, the Examiner relies on KIM (and HANDBOOK) and essentially alleges that KIM discloses polyurethanes which are soluble or dispersible in water as aids in cosmetic compositions and have K values and glass transition temperatures that meet the recitations of the rejected claims. The Examiner further asserts that it would have been obvious to one of ordinary skill in the art to employ the polyurethanes of KIM in the compositions of KANTNER because both KANTNER and KIM allegedly are directed toward water soluble/dispersible polyurethanes for use in cosmetics and because of the expectation of achieving a sunscreen product that is resistant to humidity or water.

Applicants respectfully disagree with the Examiner in this regard for all of the reasons which are set forth in the Appeal Brief filed September 29, 2008 and the Reply Brief filed May 4, 2009.

Further, as set forth above, the Examiner essentially takes the position that one of ordinary skill in the art would have been prompted to replace the polyurethanes in the cosmetic compositions of KANTNER by the polyurethanes of KIM, which later polyurethanes have K-values and glass transition temperatures within the ranges recited in the instant claims.

In this regard, it is noted that it is well known to one of ordinary skill in the art (and is also set forth in the present specification) that the K-value of a polymer is dependent on the average molecular weight of a given polymer, higher K-values corresponding to higher average molecular weights.

The Examples of KIM set forth several (seven) polyurethanes, of which polyurethanes Nos. 6 and 7 are according to the invention set forth in KIM (col. 8, lines 1-3). Both of these polyurethanes are readily soluble in water and ethanol (see top of columns 9 and 10 of KIM), which raises the question how these polyurethanes are supposed to impart the required water-resistance to the cosmetic compositions of KANTNER. Further, these polymers have K-values of 28 and 26.5, respectively (i.e., within the ranges recited in the instant claims).

The starting materials for the preparation of these polyurethanes are (see Table at the bottom of columns 7 and 8 of KIM in combination with col. 6, line 65 to col. 7, line 35) isophorone diisocyanate as polyisocyanate component and either (i) polylactic acid-ethylene glycol (MW = 450 g/mol) and dimethylolpropanoic acid (MG 134 g/mol) or (ii) polylactic acid-ethylene glycol (MW = 450 g/mol), neopentylglycol (MW = 102 g/mol), a condensate of pyromellitic dianhydride and neopentylglycol (MW = about 430 g/mol) and a condensate of the sodium salt of 5-sulfoisophthalic acid with neopentylglycol (MW = about 440 g/mol) as diol component. In other words, all of the diol starting materials that are employed for the preparation of the polyurethanes of KIM have a relatively low molecular weight, with an average molecular weight based on the number of moles employed of about 240 (No. 6) and about 355 (No. 7).

Further, all of the cosmetic compositions which are exemplified in KANTNER employ either the polyurethane dispersion of Example 16 or the polyurethane dispersion of Example 36.

The polyurethane dispersion of Example 16 of KANTNER is prepared from isophorone diisocyanate as polyisocyanate component (the same as in polyurethanes Nos. 6 and 7 of KANTNER) and from (1) KRATON L-2203 diol (according to Examples 1-3 of KANTNER a

hydrogenated polybutadiene diol having an OH equivalent of 1660), (2) TERATHANE 2000 diol (according to Examples 1-3 of KANTNER a polytetramethylene oxide diol having an OH equivalent of 1020) and (3) sulfopolyester diol B (according to col. 16, lines 61-64 of KANTNER having a theoretical sulfonate equivalent weight of 1879 g polymer/mol sulfonate) as diol component.

The polyurethane dispersion of Example 36 of KANTNER is prepared from isophorone diisocyanate as polyisocyanate component (the same as in polyurethanes Nos. 6 and 7 of KANTNER) and from (1) KRATON L-2203 diol (according to Examples 1-3 of KANTNER a hydrogenated polybutadiene diol having an OH equivalent of 1660), (2) TEXOX WL-1400 (according to Examples 32-37 of KANTNER an ethylene glycol/propylene glycol random copolymer diol having a molecular weight of 2470) and (3) sulfopolyester diol B (according to col. 17, lines 7-9 of KANTNER having a theoretical sulfonate equivalent weight of 2632 g polymer/mol sulfonate) as diol component.

In other words, even if the OH equivalents and sulfonate equivalents of the diol components employed for the preparation of the polyurethanes used in the exemplified cosmetic compositions of KANTNER are assumed to be the same as (i.e., not higher than) the corresponding average molecular weights, the combined average molecular weight of these diol components is greater by a factor of about 3 to 4 than the average molecular weights of the diol components employed according to KIM. Accordingly, the polyurethanes of KANTNER can reasonably be expected to have a significantly higher average molecular weight (and thus significantly higher K-values) than the polyurethanes employed by KIM.

This significant difference in (average) molecular weights between the polyurethanes and KANTNER and KIM set forth above is yet another reason why one of ordinary skill in the art has no apparent reason to assume that the polyurethanes in the cosmetic compositions according to KANTNER can (successfully) be replaced by the polyurethanes of KIM.

CONCLUSION

In view of the foregoing, it still is believed that all of the claims in this application are in condition for allowance, which action is respectfully requested. If any issues yet remain which can be resolved by a telephone conference, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Respectfully submitted,
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June 2, 2010
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